HURLEY TRACTS HOMEOWNERS ASSOCIATION (PWS 6030021)
SOURCE WATER ASSESSMENT FINAL REPORT

November 13, 2000

State of Idaho
Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

This report, *Source Water Assessment for the Hurley Tracts Homeowners Association.* describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The Hurley Tracts Homeowners Association drinking water system consists of two well sources that are manifolded together. The wells intersect a Group 1 priority area for the volatile organic chemical Tetrachloroethene. Total coliform bacteria exceeded the Maximum Contaminant Level in the sampling efforts of November 1998. Nitrate levels range from 7.9 mg/L to 9.0 mg/L in Well #1 and 7.9 mg/L to 9.6 mg/L in Well #2. The potential contaminant sources within the delineation capture zones include underground and above ground storage tank facilities, small businesses which may use and store chemicals and organic materials, former leaking underground storage tank sites, historical business such as old gas stations, auto repair and sales facilities, food processing facilities, and several manufacturing facilities. The final susceptibility ranking for both wells was high for volatile organic contaminants, inorganic contaminants, and microbial contaminants and moderate for synthetic organic contaminants.

For the Hurley Tracts Homeowners Association, source water protection activities should focus on the potential risks due to volatile and synthetic organic contaminants, and inorganic contaminants (nitrates). The water system should consider disinfection if microbial problems arise and/or persist. The water system should consider connecting to the City of Pocatello's water system and abandoning the two wells. This would eliminate sampling requirements and cost associated with the sampling for the water system. Another option would be to install a reverse osmosis system that would eliminate the nitrate problem. Any new businesses that employ potentially harmful chemicals should be monitored as well. Land uses within most of the source water assessment area are beyond the control of Hurley Tracts Homeowners Association. Therefore, partnerships with state and local agencies should be established to ensure future land uses is protective of ground water quality. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies please contact the Pocatello Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR HURLEY TRACTS HOMEOWNERS ASSOCIATION, Pocatello, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings used to develop this assessment is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. DEQ recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

Hurley Tracts Homeowners Association. is community public drinking water system serving approximately 50 persons. The water system is located within the city limits of Pocatello in Bannock County (Figure 1). The Hurley Tracts Homeowners Association. water system consists of two wells which are currently threatened by levels of nitrate contamination that approach the drinking water Maximum Contaminant Level (MCL) for nitrate (10 mg/L). Total coliform bacteria were detected above the MCL in the water sampling event of November 1998. The water system is also threatened by possible volatile organic chemicals (VOCs) and synthetic organic chemicals (SOCs) contaminants from nearby underground storage tank facilities, and the problems associated with managing this contamination.

Defining the Zones of Contribution--Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time of travel zones (zones indicating the number of years necessary for a particle of water to reach a pumping well) for water in the aquifer. Dr. John Welhan of the Idaho Geological Survey used analytical computer models approved by the EPA to determine the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) time of travel zones (TOT) for water associated with the Lower Portneuf River Area.

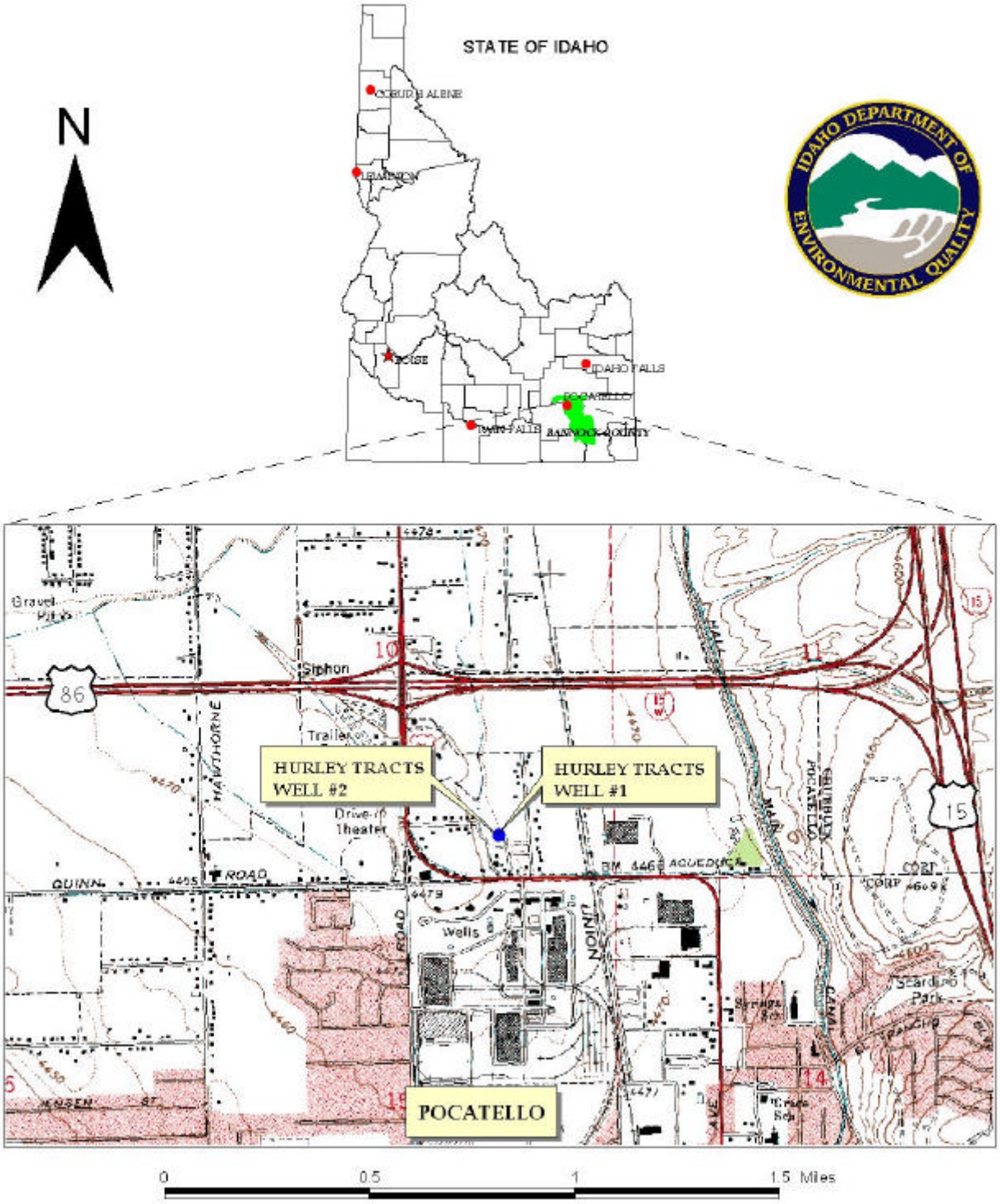
The computer model used aquifer parameters, such as porosity, and well information, such as well discharge rate and estimates of local hydraulic gradient to calculate the capture zones. The aquifer thickness was based on a value in Idaho (Appendix F, Idaho Wellhead Protection Plan.) The well-specific information was derived from a variety of sources including sanitary surveys, local well logs, and operator records. The actual data used by Dr. Welhan in determining the zones of contribution are available upon request.

The Hurley Tracts wells draw water from the highly permeable Bonneville gravels and underlying, older gravels. Recharge to these gravels is primarily from tributary underflow along the length of the lower Portneuf valley and lower Marsh Creek valley.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

Figure 1 - Geographic Location of Hurley Tracts Inc.



It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted during the spring and summer of 2000. This involved identifying and documenting potential contaminant sources within the Hurley Tracts Association. Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ.

There are a total of 360 potential contaminant sources located in the delineated capture zones. Some of these sources include underground and above ground storage tank facilities, small businesses which may use and store chemicals and organic materials, former leaking underground storage tanks sites, historical business such as old gas stations, auto repair and sales facilities, food processing facilities, and several manufacturing facilities (Figure 2). Contaminants of concern are primarily business chemicals such as petroleum products, solvents, degreasers, nitrates, acids, and creosote from preserving wood ties. Table 1 lists the potential contaminants of concern, time of travel zones, and information source.

Table 1. Hurley Tracts Homeowners Association
Potential Contaminant Inventory for Wells #1 & #2

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
1	Former LUST site	0-3	Database Inventory	VOC, SOC
2	Former LUST site	0-3	Database Inventory	VOC, SOC
3	Former LUST site	0-3	Database Inventory	VOC, SOC
4	Former LUST site (see mapid 35)	0-3	Database Inventory	VOC, SOC
5	Former LUST site (see mapid 43)	0-3	Database Inventory	VOC, SOC
6	Former LUST site (see mapid 45)	0-3	Database Inventory	VOC, SOC
7	Former LUST site (see mapid 55, 325)	0-3	Database Inventory	VOC, SOC
8	Former LUST site (see mapid 60, 158)	0-3	Database Inventory	VOC, SOC
9	Former LUST site (see mapid 86)	0-3	Database Inventory	VOC, SOC
10	Former LUST site	0-3	Database Inventory	VOC, SOC
11	Former LUST site (see mapid 84)	0-3	Database Inventory	VOC, SOC
12	Former LUST site (see mapid 85)	0-3	Database Inventory	VOC, SOC
13	Former UST site	0-3	Database Inventory	VOC, SOC
14	Former UST site	0-3	Database Inventory	VOC, SOC
15	Former UST site (see mapid 159)	0-3	Database Inventory	VOC, SOC
16	Former UST site	0-3	Database Inventory	VOC, SOC
17	Former UST site	0-3	Database Inventory	VOC, SOC
18	UST site (see mapid 210)	0-3	Database Inventory	VOC, SOC
19	UST site	0-3	Database Inventory	VOC, SOC
20	Former UST site	0-3	Database Inventory	VOC, SOC
21	Former UST site	0-3	Database Inventory	VOC, SOC
22	Former UST site	0-3	Database Inventory	VOC, SOC
23	UST site	0-3	Database Inventory	VOC, SOC
24	UST site (see mapid 261, 328)	0-3	Database Inventory	VOC, SOC
25	UST site	0-3	Database Inventory	VOC, SOC
26	Former UST site	0-3	Database Inventory	VOC, SOC
27	Former UST site	0-3	Database Inventory	VOC, SOC
28	Former UST site (see mapid 275)	0-3	Database Inventory	VOC, SOC
29	Former UST site (see mapid 103, 293, 332)	0-3	Database Inventory	VOC, SOC
30	UST site (see mapid 335)	0-3	Database Inventory	VOC, SOC
31	Former UST site	0-3	Database Inventory	VOC, SOC
32	Former UST site	0-3	Database Inventory	VOC, SOC
33	Former UST site (see mapid 175, 302)	0-3	Database Inventory	VOC, SOC
34	UST site	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
35	Former UST site	0-3	Database Inventory	VOC, SOC
36	Former UST site	0-3	Database Inventory	VOC, SOC
37	Former UST site	0-3	Database Inventory	VOC, SOC
38	UST site	0-3	Database Inventory	VOC, SOC
39	Former UST site	0-3	Database Inventory	VOC, SOC
40	UST site	0-3	Database Inventory	VOC, SOC
41	Former UST site	0-3	Database Inventory	VOC, SOC
42	Former UST site (see mapid 312, 327)	0-3	Database Inventory	VOC, SOC
43	Former UST site	0-3	Database Inventory	VOC, SOC
44	UST site	0-3	Database Inventory	VOC, SOC
45	Former UST site	0-3	Database Inventory	VOC, SOC
46	UST site (see mapid 330)	0-3	Database Inventory	VOC, SOC
47	Former UST site	0-3	Database Inventory	VOC, SOC
48	Former UST site	0-3	Database Inventory	VOC, SOC
49	Former UST site	0-3	Database Inventory	VOC, SOC
50	Former UST site	0-3	Database Inventory	VOC, SOC
51	Former UST site	0-3	Database Inventory	VOC, SOC
52	UST site	0-3	Database Inventory	VOC, SOC
53	UST site	0-3	Database Inventory	VOC, SOC
54	Former UST site (see mapid 156)	0-3	Database Inventory	VOC, SOC
55	UST site	0-3	Database Inventory	VOC, SOC
56	UST site (see mapid 326)	0-3	Database Inventory	VOC, SOC
57	Former UST site	0-3	Database Inventory	VOC, SOC
58	Former UST site	0-3	Database Inventory	VOC, SOC
59	Former UST site (see mapid 176)	0-3	Database Inventory	VOC, SOC
60	Former UST site	0-3	Database Inventory	VOC, SOC
61	Former UST site	0-3	Database Inventory	VOC, SOC
62	Former UST site	0-3	Database Inventory	VOC, SOC
63	UST site (see mapid 238)	0-3	Database Inventory	VOC, SOC
64	Former UST site	0-3	Database Inventory	VOC, SOC
65	Former UST site (see mapid 101)	0-3	Database Inventory	VOC, SOC
66	Former UST site	0-3	Database Inventory	VOC, SOC
67	UST site	0-3	Database Inventory	VOC, SOC
68	UST site	0-3	Database Inventory	VOC, SOC
69	Former UST site	0-3	Database Inventory	VOC, SOC
70	Former UST site	0-3	Database Inventory	VOC, SOC
71	Former UST site	0-3	Database Inventory	VOC, SOC
72	Former UST site	0-3	Database Inventory	VOC, SOC
73	Former UST site	0-3	Database Inventory	VOC, SOC
74	UST site (see mapid 331)	0-3	Database Inventory	VOC, SOC
75	UST site (see mapid 268)	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
76	Former UST site	0-3	Database Inventory	VOC, SOC
77	Former UST site	0-3	Database Inventory	VOC, SOC
78	Former UST site	0-3	Database Inventory	VOC, SOC
79	UST site (see mapid 207)	0-3	Database Inventory	VOC, SOC
80	Former UST site	0-3	Database Inventory	VOC, SOC
81	Former UST site	0-3	Database Inventory	VOC, SOC
82	Former UST site	0-3	Database Inventory	VOC, SOC
83	Former UST site (see mapid 118)	0-3	Database Inventory	VOC, SOC
84	Former UST site	0-3	Database Inventory	VOC, SOC
85	Former UST site	0-3	Database Inventory	VOC, SOC
86	Former UST site	0-3	Database Inventory	VOC, SOC
87	Carpet & Rug Cleaners	0-3	Database Inventory	VOC
88	Automobile Parts & Supplies	0-3	Database Inventory	VOC
89	Photographic Equipment-Repairing	0-3	Database Inventory	VOC
90	Veterinarians	0-3	Database Inventory	IOC
91	Veterinarians	0-3	Database Inventory	IOC
92	Ambulance Service	0-3	Database Inventory	VOC
93	Semiconductor Devices (Manufacture)	0-3	Database Inventory	VOC
94	General Contractors	0-3	Database Inventory	VOC, SOC
95	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
96	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
97	County Government-Transportation Program	0-3	Database Inventory	VOC, SOC
98	Tire Dealers	0-3	Database Inventory	VOC, SOC
99	Auto Dealers	0-3	Database Inventory	VOC, SOC
100	Auto Repair & Service	0-3	Database Inventory	VOC, SOC
101	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
102	Christmas Trees	0-3	Database Inventory	IOC, VOC, SOC
103	Petroleum Distributor	0-3	Database Inventory	VOC, SOC
104	General Contractors	0-3	Database Inventory	VOC, SOC
105	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
106	Auto Dealers	0-3	Database Inventory	VOC, SOC
107	Auto Renting & Leasing	0-3	Database Inventory	VOC, SOC
108	Furniture-Repairing & Refinishing	0-3	Database Inventory	VOC
109	Veterinarians	0-3	Database Inventory	IOC
110	Auto Dealers	0-3	Database Inventory	VOC, SOC
111	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
112	Auto Dealers	0-3	Database Inventory	VOC, SOC
113	Printing Co.	0-3	Database Inventory	VOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
114	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
115	Storage-Household & Commercial	0-3	Database Inventory	VOC
116	Painters	0-3	Database Inventory	VOC
117	Veterinarians	0-3	Database Inventory	IOC
118	Electric Equipment & Supplies	0-3	Database Inventory	VOC
119	UST site	0-3	Database Inventory	VOC, SOC
120	Auto Dealers	0-3	Database Inventory	VOC, SOC
121	Auto Repair	3 YR	Database Inventory	VOC, SOC
122	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
123	Pet Services	0-3	Database Inventory	IOC
124	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
125	Auto Detail & Clean-Up Service	0-3	Database Inventory	VOC, SOC
126	Janitors Supplies (see mapid 127)	0-3	Database Inventory	IOC
127	Janitor Service	0-3	Database Inventory	IOC
128	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
129	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
130	Service Station Equipment	0-3	Database Inventory	VOC, SOC
131	Laboratories-Dental	0-3	Database Inventory	IOC
132	Water Treatment	0-3	Database Inventory	IOC
133	Automobile Parts & Supplies-Retail	0-3	Database Inventory	VOC, SOC
134	Electric Equipment & Supplies-Whol	0-3	Database Inventory	IOC, VOC
135	Auto Renting & Leasing	0-3	Database Inventory	VOC, SOC
136	Hardware Store & Nursery	0-3	Database Inventory	IOC
137	Lawn Maintenance	0-3	Database Inventory	IOC
138	Veterinarians	0-3	Database Inventory	IOC
139	Cleaners	0-3	Database Inventory	VOC
140	Auto Dealers	0-3	Database Inventory	VOC, SOC
141	Florist	0-3	Database Inventory	IOC
142	UST site	0-3	Database Inventory	VOC, SOC
143	Taxidermists	0-3	Database Inventory	IOC
144	Cleaners	0-3	Database Inventory	VOC
145	Commercial Printing	0-3	Database Inventory	VOC
146	Boat Repairs	0-3	Database Inventory	VOC, SOC
147	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
148	Auto Repair	0-3	Database Inventory	VOC, SOC
149	Photographic Equip & Supplies	0-3	Database Inventory	VOC
150	Photo Finishing	0-3	Database Inventory	VOC
151	Photo Finishing	0-3	Database Inventory	VOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
152	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
153	Auto Detail & Clean-Up Service	0-3	Database Inventory	VOC, SOC
154	Welding Equip & Supplies	0-3	Database Inventory	VOC
155	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
156	Linen Supply Service	0-3	Database Inventory	IOC
157	Janitors Supplies	0-3	Database Inventory	IOC
158	Contractors-Equipment Rental	0-3	Database Inventory	VOC, SOC
159	Grain Elevators	0-3	Database Inventory	IOC
160	Auto Dealers	0-3	Database Inventory	VOC, SOC
161	Automobile Service	0-3	Database Inventory	VOC, SOC
162	Landscape Contractors	0-3	Database Inventory	IOC
163	Refractories	0-3	Database Inventory	VOC
164	Storage-Household & Commercial	0-3	Database Inventory	VOC, SOC
165	Auto Dealers	0-3	Database Inventory	VOC, SOC
166	Truck Dealer	0-3	Database Inventory	VOC, SOC
167	Funeral Director	0-3	Database Inventory	IOC
168	Janitors Supplies	0-3	Database Inventory	IOC
169	Hospital	0-3	Database Inventory	IOC
170	Veterinarians	0-3	Database Inventory	IOC
171	Manufacturing	0-3	Database Inventory	VOC, SOC
172	Veterinarians	0-3	Database Inventory	IOC
173	Veterinarians (see mapid 174)	0-3	Database Inventory	IOC
174	Veterinarians	0-3	Database Inventory	IOC
175	Auto Dealers	0-3	Database Inventory	VOC, SOC
176	Truck-Repairing & Service	0-3	Database Inventory	VOC, SOC
177	Auto Repair	0-3	Database Inventory	VOC, SOC
178	Roofing Contractors (see mapid 179)	0-3	Database Inventory	VOC, SOC
179	Roofing Contractors	0-3	Database Inventory	VOC, SOC
180	Manufacturers	0-3	Database Inventory	VOC, SOC
181	Jewelry-Manufacturers	0-3	Database Inventory	VOC
182	Electric Company	0-3	Database Inventory	VOC, SOC
183	Trailers/Truck –Manuf	0-3	Database Inventory	VOC, SOC
184	Woodworkers	0-3	Database Inventory	VOC, SOC
185	Photo Finishing-Retail	0-3	Database Inventory	VOC
186	Delivery Service	0-3	Database Inventory	VOC, SOC
187	Parking Area Maintenance & Marking	0-3	Database Inventory	VOC, SOC
188	Auto Repair	0-3	Database Inventory	VOC, SOC
189	Auto Repair	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
190	Auto Repairing & Service (see mapid 191)	0-3	Database Inventory	VOC, SOC
191	Automobile Equip	0-3	Database Inventory	VOC, SOC
192	Auto Repairing & Service	0-3	Database Inventory	VOC, SOC
193	General Contractors	0-3	Database Inventory	VOC, SOC
194	General Contractors	0-3	Database Inventory	VOC, SOC
195	Automobile Parts	0-3	Database Inventory	VOC, SOC
196	Concrete Contractors	0-3	Database Inventory	VOC, SOC
197	Printing Co	0-3	Database Inventory	VOC
198	Veterinarians	0-3	Database Inventory	IOC
199	Funeral Directors	0-3	Database Inventory	IOC
200	Movers	0-3	Database Inventory	VOC, SOC
201	Tire Dealers	0-3	Database Inventory	VOC, SOC
202	Popcorn Machines (Manufacturers)	0-3	Database Inventory	VOC
203	Printing Co.	0-3	Database Inventory	VOC
204	Signs – Manufact	0-3	Database Inventory	VOC
205	Funeral Director	0-3	Database Inventory	IOC
206	Publishers-Book	0-3	Database Inventory	VOC, SOC
207	Auto Service	0-3	Database Inventory	VOC, SOC
208	Auto Repair	0-3	Database Inventory	VOC, SOC
209	Carpet & Rug Cleaners	0-3	Database Inventory	VOC
210	Auto Repair & Service	0-3	Database Inventory	VOC, SOC
211	Auto Repair	0-3	Database Inventory	VOC, SOC
212	Motorcycles Dealer	0-3	Database Inventory	VOC, SOC
213	Woodworkers	0-3	Database Inventory	VOC
214	Movers	0-3	Database Inventory	VOC, SOC
215	Laundries	0-3	Database Inventory	VOC, IOC
216	Plumbing Supplies	0-3	Database Inventory	VOC
217	Recycling Centers	0-3	Database Inventory	VOC, SOC
218	Auto Dealers	0-3	Database Inventory	VOC, SOC
219	Home Builders	0-3	Database Inventory	VOC, SOC
220	Auto Dealer	0-3	Database Inventory	VOC, SOC
221	Laboratory-Dental	0-3	Database Inventory	IOC
222	Plumbing/Sewer Cleaning	0-3	Database Inventory	VOC
223	Electric Equipment & Supplies	0-3	Database Inventory	VOC
224	Fire Department	0-3	Database Inventory	VOC, SOC
225	Storage-Household & Commercial	0-3	Database Inventory	VOC, SOC
226	Sweeping Service	0-3	Database Inventory	VOC, SOC
227	Motorcycles & Motor Scooters-Supply	0-3	Database Inventory	VOC, SOC
228	Fire Department	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
229	Fire Department (see mapid 224, 228, 230, 231, 232)	0-3	Database Inventory	VOC, SOC
230	Fire Department	0-3	Database Inventory	VOC, SOC
231	Fire Department	0-3	Database Inventory	VOC, SOC
232	Fire Department	0-3	Database Inventory	VOC
233	City Street Department	0-3	Database Inventory	VOC, SOC
234	Laboratories-Dental	0-3	Database Inventory	IOC
235	Machine Shop	0-3	Database Inventory	VOC, SOC
236	Auto Repair	0-3	Database Inventory	VOC, SOC
237	Auto Repair	0-3	Database Inventory	VOC, SOC
238	UST site	0-3	Database Inventory	VOC, SOC
239	Car Washing & Polishing	0-3	Database Inventory	VOC, SOC
240	Auto Dealer	0-3	Database Inventory	VOC, SOC
241	Roofing Contractors	0-3	Database Inventory	VOC, SOC
242	Paving & Asphalt Product	0-3	Database Inventory	VOC, SOC
243	Auto Dealer	0-3	Database Inventory	VOC, SOC
244	Auto Detail & Clean-Up Service	0-3	Database Inventory	VOC, SOC
245	Printing Co	0-3	Database Inventory	VOC
246	Storage-Household & Commercial	0-3	Database Inventory	VOC
247	Auto Repair	0-3	Database Inventory	VOC, SOC
248	Tire Dealers	0-3	Database Inventory	VOC< SOC
249	Auto Renting & Leasing	0-3	Database Inventory	VOC, SOC
250	Photographers-Portrait	0-3	Database Inventory	VOC
251	Paint Store	0-3	Database Inventory	VOC, SOC
252	Building Contractors	0-3	Database Inventory	VOC, SOC
253	Roofing Contractors	0-3	Database Inventory	VOC, SOC
254	Signs-Manufacturing	0-3	Database Inventory	VOC, SOC
255	Screen Printing	0-3	Database Inventory	VOC, SOC
256	Logging Company	0-3	Database Inventory	VOC, SOC
257	Cutlery-Manufact	0-3	Database Inventory	VOC, SOC
258	General Contractors	0-3	Database Inventory	VOC, SOC
259	Machine Shop	0-3	Database Inventory	VOC, SOC
260	UST site	0-3	Database Inventory	VOC, SOC
261	UST site	0-3	Database Inventory	VOC, SOC
262	Cleaners	0-3	Database Inventory	VOC, SOC
263	Car Washing & Polishing	0-3	Database Inventory	VOC, SOC
264	Auto Repair	0-3	Database Inventory	VOC, SOC
265	Painters	0-3	Database Inventory	VOC, SOC
266	Auto Dealer	0-3	Database Inventory	VOC, SOC
267	Newspaper (Publishers)	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
268	Car Washing & Polishing	0-3	Database Inventory	VOC, SOC
269	Tire Dealers	0-3	Database Inventory	VOC, SOC
270	Auto Repair	0-3	Database Inventory	VOC, SOC
271	Auto Repair	0-3	Database Inventory	VOC, SOC
272	Warehouses-Merchandise	0-3	Database Inventory	VOC, SOC
273	Auto Renting & Leasing	0-3	Database Inventory	VOC, SOC
274	Truck Renting & Leasing	0-3	Database Inventory	VOC, SOC
275	Truck Renting & Leasing	0-3	Database Inventory	VOC, SOC
276	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
277	US Government	0-3	Database Inventory	VOC, SOC
278	US Government	0-3	Database Inventory	VOC, SOC
279	US Government	0-3	Database Inventory	VOC, SOC
280	Trucking-Motor Freight	0-3	Database Inventory	VOC, SOC
281	General Contractors	0-3	Database Inventory	VOC, SOC
282	Movers	0-3	Database Inventory	VOC, SOC
283	Hydraulic Equipment & Supplies	0-3	Database Inventory	VOC, SOC
284	Auto Service	0-3	Database Inventory	VOC, SOC
285	Roofing Contractors	0-3	Database Inventory	VOC, SOC
286	Woodworkers	0-3	Database Inventory	VOC, SOC
287	General Contractors	0-3	Database Inventory	VOC, SOC
288	Auto Parts & Supplies	0-3	Database Inventory	VOC, SOC
289	Cleaners	0-3	Database Inventory	VOC, SOC
290	Railroad	0-3	Database Inventory	VOC, SOC
291	Manufacturing	0-3	Database Inventory	VOC, SOC
292	School District	0-3	Database Inventory	VOC, SOC
293	Petroleum Distributor	0-3	Database Inventory	VOC, SOC
294	Paint Supplies and Sales (see mapid 116)	0-3	Database Inventory	VOC, SOC
295	Auto Dealer	0-3	Database Inventory	VOC, SOC
296	Water supply and sales	0-3	Database Inventory	IOC
297	Medical Facility	0-3	Database Inventory	IOC
298	Cleaners (see mapid 139)	0-3	Database Inventory	IOC, VOC
299	Mail delivery	0-3	Database Inventory	VOC, SOC
300	Cleaners (see mapid 144)	0-3	Database Inventory	VOC, SOC
301	Manufacture	0-3	Database Inventory	VOC, SOC
302	Auto Dealer	0-3	Database Inventory	VOC, SOC
303	State Government	0-3	Database Inventory	VOC, SOC
304	Electric Company	0-3	Database Inventory	VOC, SOC
305	College Facility	0-3	Database Inventory	VOC, SOC
306	Auto Repair (see mapid 188)	0-3	Database Inventory	VOC, SOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
307	Environmental Co.	0-3	Database Inventory	VOC, SOC
308	Manufacturing	0-3	Database Inventory	VOC, SOC
309	Auto Repair	0-3	Database Inventory	VOC, SOC
310	Parts-Manufact (see mapid 217)	0-3	Database Inventory	
311	Auto Dealer (see mapid 220)	0-3	Database Inventory	VOC, SOC
312	Religious Organization	0-3	Database Inventory	VOC, SOC
313	Auto Repair	0-3	Database Inventory	VOC, SOC
314	Department Store and Tire	0-3	Database Inventory	VOC, SOC
315	Tire and Auto Store	0-3	Database Inventory	VOC, SOC
316	Cleaning	0-3	Database Inventory	VOC
317	Auto Repair (see mapid 271)	0-3	Database Inventory	VOC, SOC
318	Manufacturing	0-3	Database Inventory	VOC, SOC
319	US Government (see mapid 329)	0-3	Database Inventory	VOC, SOC
320	Auto Service (see mapid 289)	0-3	Database Inventory	VOC, SOC
321	School District	0-3	Database Inventory	VOC, SOC
322	Auto Repair (see mapid 237)	0-3	Database Inventory	VOC, SOC
323	Mine	0-3	Database Inventory	VOC, SOC
324	Mine	0-3	Database Inventory	VOC, SOC
325	UST site	0-3	Database Inventory	VOC, SOC
326	UST site	0-3	Database Inventory	VOC, SOC
327	Religious Organization	0-3	Database Inventory	VOC< SOC
328	UST site	0-3	Database Inventory	VOC, SOC
329	US Government	0-3	Database Inventory	IOC
330	Groceries	0-3	Database Inventory	IOC
331	Petroleum Distributor	0-3	Database Inventory	VOC, SOC
332	Petroleum Distributor	0-3	Database Inventory	VOC, SOC
333	UST site	0-3	Database Inventory	VOC, SOC
334	UST site	0-3	Database Inventory	VOC, SOC
335	AST	0-3	Database Inventory	VOC, SOC
336	AST	0-3	Database Inventory	VOC, SOC
337	AST	0-3	Database Inventory	VOC, SOC
338	Former LUST site (see mapid 342, 349)	3-6	Database Inventory	VOC, SOC
339	Former LUST site	3-6	Database Inventory	VOC, SOC
340	Former LUST site	3-6	Database Inventory	VOC, SOC
341	Former LUST site	3-6	Database Inventory	VOC, SOC
342	UST site	3-6	Database Inventory	VOC, SOC
343	Former UST site	3-6	Database Inventory	VOC, SOC
344	Former UST site	3-6	Database Inventory	VOC, SOC
345	Former UST site	3-6	Database Inventory	VOC, SOC
346	Former UST site	3-6	Database Inventory	VOC, SOC
347	Dog and Cat Kennels	3-6	Database Inventory	IOC

Site #	Source Description	TOT Zone (years)	Source of Information	Potential Contaminants
348	Funeral Directors	3-6	Database Inventory	IOC
349	UST site	3-6	Database Inventory	VOC, SOC
350	Dog & Cat Kennels	3-6	Database Inventory	IOC
351	General Contractors	3-6	Database Inventory	VOC, SOC
352	General Contractors	3-6	Database Inventory	VOC, SOC
353	Government-Specialty Hosp Ex Psych	3-6	Database Inventory	IOC
354	Cut Stone & Stone Products (Mfrs)	3-6	Database Inventory	VOC
355	UST site	6-10	Database Inventory	VOC, SOC
356	Former UST site	6-10	Database Inventory	VOC, SOC
357	Golf Course	6-10	Database Inventory	IOC
358	Painters	6-10	Database Inventory	VOC
359	UST site (see mapid 360)	0-3	Database Inventory	VOC, SOC
360	US Government (see mapid 359)	0-3	Database Inventory	VOC, SOC

TOT = time of travel (in years) for a potential contaminant to reach the wellhead
UST = underground storage tank, AST = Aboveground storage tank
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 3. Susceptibility Analyses

The susceptibility of the sources to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

Hydrologic sensitivity was rated high for both well sources (Table 2). The soils in the well delineations are considered to be in the moderate to well drainage class. No well log data was available to determine the make up of the vadose zone (zone from land surface to the water table). Furthermore, there is no information as to whether the wells have 50 feet of low permeability units which would reduce the downward flow of contaminants.

Well Construction

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a system that can better protect the water. The Hurley Tracts Homeowners Association. drinking water system consists of two wells that extract ground water for domestic uses. The well system construction rating was moderate for both wells (Table 2). Though no well logs are available, a 1999 sanitary survey report shows both wells have 10-inch diameter casing. The report also

shows that the sanitary seals for both wells are in compliance with DEQ regulations. There was a lack of information concerning gravel packing and surface sealing, two important aspects of proper well construction

The wells were given an additional point because it could not be determined if they meet current well construction standards. The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWSs) follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works (1997)* states that 10-inch steel casing requires a thickness of 0.365 inches, instead of the presumed 0.25 inch thickness of the two wells. The standards state that screen will be installed and have openings based on sieve analysis of the formation. Standard 3.2.4.1 requires all PWSs to have yield and drawdown tests that last "24 hours or until stabilized drawdown has continued for six hours at 1.5 times" the design pumping rate (Recommended Standards for Water Works, 1997).

Potential Contaminant Source and Land Use

The wells rated moderate for inorganic chemicals (IOCs) (i.e. nitrate, sodium, barium), and SOC contaminants, and low for microbial contaminants and high for VOC contaminants. For both wells, petroleum fuel storage facilities in the delineated source areas contributed the largest number of points to the contaminant inventory rating. Total coliform bacteria exceeded the Maximum Contaminant Level in the sampling efforts of November 1998. Nitrate levels range from 7.9 mg/L to 9.0 mg/L in Well #1 and 7.9 mg/L to 9.6 mg/L in Well #2.

The Group 1 organic priority area for the volatile chemicals PERC was identified because at least 25% of the local area wells have detections greater than 1% of the primary standard or other health standard. Since the Hurley Tracts Homeowners Assn. wells are located in this area, the likelihood of VOC impacts from business activities increases.

The dominant land use outside the Hurley Tracts Homeowners Association. is urban development and consists of residential homes, small businesses, and light manufacturing. Homes within the water system are connected to the City of Pocatello's sewer system.

Final Susceptibility Rating

A detection above a drinking water standard Maximum Contaminant Level (MCL), any detection of a VOC or SOC, or a detection of total coliform or fecal coliform will automatically give a high susceptibility rating to the final well ranking despite the land use of the area because a pathway for contamination already exists. It this case, the final well rankings were high for VOC and microbial contaminants and moderate for IOC and SOC contaminants.

Table 2. Summary of Hurley Tracts Homeowners Association Susceptibility Evaluation

Well	Susceptibility Scores									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
1	H	M	H	M	L	M	H	H	M	H*
2	H	M	H	M	L	M	H	H	M	H*

H = High Susceptibility, M = Moderate Susceptibility, L= Low Susceptibility
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical
H* - Indicates source automatically scored as high susceptibility due to presence Total Coliform Bacteria above the maximum contaminant level in the tested drinking water

Susceptibility Summary

DEQ records indicate no detection of a VOC or SOC contaminants in the drinking water. The wells rated high for VOCs and moderate for SOCs because of several petroleum fuel storage tanks located in the delineated capture zones. The wells rated high in the microbial category because the MCL was exceeded in November 1998 for total coliform bacteria.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the Hurley Tracts Homeowners Association, source water protection activities should focus on identifying and eliminating the source(s) of nitrates. The water system should consider connecting to the City of Pocatello's water system and abandoning the two wells. This would eliminate sampling requirements and cost associated with the sampling for the water system. Another option would be to install a reverse osmosis system which would eliminate the nitrate problem. The water system should also focus on the potential risks due to volatile and synthetic organic contaminants. Disinfection should considered if microbial problems arise and/or persist. Any new businesses that employ potentially harmful chemicals should be monitored as well. Land uses within most of the source water assessment area are beyond the control of Hurley Tracts Homeowners Association. Therefore, partnerships with state and local agencies should be established to ensure future land uses is protective of ground water quality. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Pocatello Regional DEQ Office (208) 236-6160

State DEQ Office (208) 373-0502

Website: http://www2.state.id.us/deq

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at 1-800-962-3257 for assistance with wellhead protection strategies.

References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environment Managers, 1997. “Recommended Standards for Water Works.”

Idaho Department of Environmental Quality. 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Southeastern District Health Department. 1999. Sanitary Survey Report for *Hurley Tracts Homeowners Association*

Welhan, J. 2000. Idaho Geologic Survey. *SWA Capture Zone Delineations, Lower Portneuf and Marsh Valleys*

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as "Superfund" is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (IDEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas**.**

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by IDEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility.

Attachment A

Hurley Tracts Homeowners Association
Susceptibility Analysis
Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)

2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

≥ 13 High Susceptibility

Ground Water Susceptibility Report Public Water System Name : HURLEY TRACTS INC Well#1

Public Water System Number 6030021

1. System Construction		SCORE				
Drill Date						
Driller Log Available	NO					
Sanitary Survey (if yes, indicate date of last survey)	YES	1999				
Well meets IDWR construction standards	NO	1				
Wellhead and surface seal maintained	YES	0				
Casing and annular seal extend to low permeability unit	NO	2				
Highest production 100 feet below static water level	NO	1				
Well located outside the 100 year flood plain	YES	0				
	Total System Construction Score	4				
2. Hydrologic Sensitivity						
Soils are poorly to moderately drained	NO	2				
Vadose zone composed of gravel, fractured rock or unknown	YES	1				
Depth to first water > 300 feet	NO	1				
Aquitard present with > 50 feet cumulative thickness	NO	2				
	Total Hydrologic Score	6				
3. Potential Contaminant / Land Use - ZONE 1A			IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL		2	2	2	2
Farm chemical use high	NO		0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES		NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A			2	2	2	2
Potential Contaminant / Land Use - ZONE 1B						
Contaminant sources present (Number of Sources)	YES		99	99	99	0
(Score = # Sources X 2) 8 Points Maximum			8	8	8	0
Sources of Class II or III leacheable contaminants or	YES		1	990	0	
4 Points Maximum			1	4	0	
Zone 1B contains or intercepts a Group 1 Area	YES		0	2	0	0
Land use Zone 1B	Less Than 25% Agricultural Land		0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B			9	14	8	0
Potential Contaminant / Land Use - ZONE II						
Contaminant Sources Present	YES		2	2	2	
Sources of Class II or III leacheable contaminants or	YES		0	1	0	
Land Use Zone II	Less than 25% Agricultural Land		0	0	0	
Potential Contaminant Source / Land Use Score - Zone II			2	3	2	0
Potential Contaminant / Land Use - ZONE III						
Contaminant Source Present	YES		1	1	0	
Sources of Class II or III leacheable contaminants or	YES		1	1	0	
Is there irrigated agricultural lands that occupy > 50% of	NO		0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III			2	2	0	0
Cumulative Potential Contaminant / Land Use Score			15	21	12	2
4. Final Susceptibility Source Score			13	14	12	11
5. Final Well Ranking			High	High	Moderate	High

Ground Water Susceptibility Report Public Water System Name : HURLEY TRACTS INC Well#2

Public Water System Number 6030021

1. System Construction		SCORE				
Drill Date						
Driller Log Available	NO					
Sanitary Survey (if yes, indicate date of last survey)	YES	1999				
Well meets IDWR construction standards	NO	1				
Wellhead and surface seal maintained	YES	0				
Casing and annular seal extend to low permeability unit	NO	2				
Highest production 100 feet below static water level	NO	1				
Well located outside the 100 year flood plain	YES	0				
	Total System Construction Score	4				
2. Hydrologic Sensitivity						
Soils are poorly to moderately drained	NO	2				
Vadose zone composed of gravel, fractured rock or unknown	YES	1				
Depth to first water > 300 feet	NO	1				
Aquitard present with > 50 feet cumulative thickness	NO	2				
	Total Hydrologic Score	6				
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score	
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2	
Farm chemical use high	NO	0	0	0		
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	YES	
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2	
Potential Contaminant / Land Use - ZONE 1B						
Contaminant sources present (Number of Sources)	YES	99	99	99	0	
(Score = # Sources X 2) 8 Points Maximum		8	8	8	0	
Sources of Class II or III leacheable contaminants or	YES	1	99	0		
4 Points Maximum		1	4	0		
Zone 1B contains or intercepts a Group 1 Area	YES	0	2	0	0	
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone 1B		9	14	8	0	
Potential Contaminant / Land Use - ZONE II						
Contaminant Sources Present	YES	2	2	2		
Sources of Class II or III leacheable contaminants or	YES	0	1	0		
Land Use Zone II	Less than 25% Agricultural Land	0	0	0		
Potential Contaminant Source / Land Use Score - Zone II		2	3	2	0	
Potential Contaminant / Land Use - ZONE III						
Contaminant Source Present	YES	1	1	0		
Sources of Class II or III leacheable contaminants or	YES	1	1	0		
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0		
Total Potential Contaminant Source / Land Use Score - Zone III		2	2	0	0	
Cumulative Potential Contaminant / Land Use Score		15	21	12	2	
4. Final Susceptibility Source Score		13	14	12	11	
5. Final Well Ranking		High	High	Moderate	High	